Quality Control

		DQA:	Date:	
NCR: Ves / No	WORK ORDER NON-CONFORMANCE / UPDATE		1	

NCR: Yes	/ No			WORK ORDER NON-CONFORMANCE / UPDATE QA Closed: Date:								
Work Order:					DISPOSITION		· · · · · · · · · · · · · · · · · · ·	AGAINST DE	PARTMENT	/PROCESS		
Part No.					Scrap Machining Small Fall Use-as-is Thermoforming Finishing			Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other	
NCR No.	· · · · · · · · · · · · · · · · · · ·		1		Work Order Update		Large Fab	Composite]	Supplier		
Root				Descri	ption of work order update	Initial	Ac	tion	Sign &			
Cause	Date	Step	Qty	,	or Non-conformance	Chief Eng	Desc	ription	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training											•	

Landi	ng (Gear		General		_	 _		
		Bending		Bend		Grain	Ovalized		Pressure/Forced
		Centre Not Concentr	ic to O/S	BOM/Route		Hardware	Over/Under tolerance	L	Temperature/Cure
¢3		Cracks		Broken/Damaged		Inspection Incomplete	Part Incorrect		Weld
`		Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear	Part Lost/Missing		Wrong Stock Pulled
		Cuffs	Г	Contamination		Maintenance	Part Moved		
		Heat Treat		Countersink		Mislabeled	Positioned Wrong		_
		Inspection Strip in Tu	ibe	Cut Too Short		Misread	Power Loss/Surge		Öther
ن وطوم		Ripples in Bend	Г	Drill Holes		Offset			
202		Torque Waves in Ext	rusion	Drawing		Out of Calibration			
₹¥.T		Turning Sequence		Finish		Out of Sequence			
		Wave/Twist in Tube		Folio	Γ	Outside Dimensions			

FAULT CATEGORY

Unapproved

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INSPECT CERTS

Quality Control

DQA:	Date:	*

NCR: Yes / No WOF

WORK ORDER NON-CONFORMANCE / UPDATE

								QA Closed	Date:	
Work Ordei	r:				DISPOSITION		AG	AINST DEPARTMENT	/PROCESS	
Work Oraci	`` 				Rework	7	Skid-tube Cros	sstube	Water Jet	Engineering
Part No	Ο.		j		Scrap	1 [—	all Fab Pro	d. Eng. Coor.	Quality
	-				Use-as-is	Therr	moforming Fin	nishing Rec/Sto	re/Packaging	Other
NCR N	0.				Work Order Update]	Large Fab Com	posite	Supplier	
									·	,
Root				1	iption of work order update	Initial	Action	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Description	Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling									• •	_
Operator										
Material	_									
Setup				·					:	
Other			i							·
Process	_	}								
Supplier									1	
Training									8	
Unapproved			L.L	<u> </u>			<u> </u>		<u> </u>	<u> </u>
			<u> </u>			AULT CATE	GORY		,	
Landin	ng proved Landing Gear				General	<u>, , , , , , , , , , , , , , , , , , , </u>			, ,	1 , .
_	Bending			<u> </u>	Bend	Grain		Ovalized		Pressure/Forced
_	Centre No	ot Concer	ntric to	o/s	BOM/Route	Hardwa		Over/Unde	· }	Temperature/Cure
	Cracks			<u> </u>	Broken/Damaged	—	ion Incomplete	Part Incorre	 	Weld
_	Crushed/	Crimped.		<u> </u>	Burrs		tions Incomplete/Unclear	—	· -	Wrong Stock Pulled
-	Cuffs		-	<u> </u>	Contamination	—	enance	Part Moved	1	
<u> </u>	Heat Trea				Countersink	Mislab		Positioned	_	٦
Ĺ	Inspection		Tube		Cut Too Short	Misrea	d	Power Loss	/Surge	Other
	→ ``			<u> </u>	Drill Holes	Offset				
	Ripples in Bend Torque Waves in Extrusion			n _	Drawing	 	Calibration			
L	Turning S	-	ļ i	<u> </u>	Finish		Sequence			
	Wave/Tw	ist in Tub	e e	1	Folio	Outside	e Dimensions			

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Work Orde February-21-13				*9768	RN*							Page 3
item ID: Revision ID:	D2348			Accept	*N900	040	100)*	Setup	Start		S1*
tem Name:	Wearplate									Stop	*N:	S 2*
Start Date:	3/18/13	Start Qty: 20.00	*20*		Cust Item I	D:						
Required Date: Reference:	3/18/13	Req'd Qty: 20.00	*20*		Customer:					Q : .		
Approvals:	Process Pla	ın:	Date:	Tooling:	Da	ate:			Run	Start	*NI	R1*
QC:		Date:	SPC (Y/N):	Da	ate:				Stop	*NI	R2*	
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accep Qty	t Rej Qty	-	Reject Number	Insp. Stamp
¹80 *1 ጸ∩*		Small Fab		0.00				20)			12-24-1
Small Fab		Memo		0.00				~~				13507
Small Fab		Install Insert	as per Dwg D2348	-4.9					÷			
190		QC5- Inspect part comple	eteness to step on W/O	0.00	•			•				
190 ^{QC}		Мето		0.00 13. 4,3	5			<u>X</u>	<u> </u>			
Quality Control					•							
									سر	,		
200		Identify as per dwg & Ste	ock Location (2 v 9	0.00					43	/4/	2	
Packaging	Ckaging Memo								- 7	_/	-	

Packaging

	•			DQA:	Date: _	•
NCR: Yes / No	WORK ORDER NON-COI	NFORMANCE / UPD.	ATE			- ,
				QA Closed:	Date:	
Work Order:	DISPOSITION		AGAINST DEP	ARTMENT/PRO	CESS	
.verk erder.	Rework	Skid-tube	Crosstube	w	/ater Jet	Engineering
Part No.	Scrap	Machining	Small Fab	Prod. En	ıg. Coor.	Quality
	Use-as-is	Thermoforming	Finishing	Rec/Store/Pa	ackaging	Other
NCR No.	Work Order Update	Large Fab	Composite		Supplier	

Initial

Chief Eng

Action

Description

Sign &

Date

Verification

QC Inspector

Description of work order update

or Non-conformance

Other							! :	
Process					-			
Supplier			j					
Training								
Unapproved								
			9	<u> </u>	FAUI	T CATEGORY		
Landi	ing (Gear	 	General			 -	
	L	Bending		Bend		Grain	Ovalized	Pressure/Forced
		Centre Not Concent	ric to O/S	BOM/Route	L	Hardware	 Over/Under tolerance	Temperature/Cure
		Cracks		Broken/Damaged		Inspection Incomplete	Part Incorrect	Weld
		Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
		Cuffs		Contamination		Maintenance	Part Moved	
		Heat Treat		Countersink		Mislabeled	Positioned Wrong	
		Inspection Strip in T	ube	Cut Too Short		Misread	Power Loss/Surge	Other
		Ripples in Bend		Drill Holes		Offset	:	
		Torque Waves in Ext	trusion	Drawing		Out of Calibration		
		Turning Sequence		Finish		Out of Sequence		
		Wave/Twist in Tube		Folio		Outside Dimensions		

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Root

Cause
Doc/Data
Equip/Tooling
Operator
Material
Setup

Date

Step

Qty

Work Orde February-21-13				*976	880*							Page 4
Item ID: Revision ID: Item Name:	D2348 Wearplate			Accept	*N900	040	100)*	Setup	Start Stop		S1* S2*
Start Date: Required Date: Reference:	3/18/13 3/18/13	Start Qty: 20.00 Req'd Qty: 20.00	*20* *20*		Cust Item I	D:			_	S		
Approvals:	Process Pl	lan:	Date:	Tooling: SPC (Y/N):		nte: ate:			Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
*210 *210* QC		QC21- Final Inspection - Memo	Work Order Release	0.00						3/4	1/30	

Quality Control

W13.04.03

			DQA:	Date:	*
60 V / N	!	MODE ODDED NON CONFORMANCE / HDDATE			

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE

Folio

										QA Closed:	Date	e:
Work Orde	ır.				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	lo				Rework Scrap Use-as-is Work Order Update	Th	۸ nerm	Machining of orming	Crosstube Small Fab Finishing Composite	_ }		Engineering Quality Other
			İ								· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Root						l l				1		
Cause	Date	Step	Qty		or Non-conformance	Chief E	Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling											:,	
Operator Material												
Setup												
Other												
Process			-									
Supplier			1 i							•		
Training												
Unapproved						<u>. </u>						
					F	AULT CA	ATEG	GORY				<u> </u>
Landin	ng Gear				General				_			
	Bending				Bend	Gra	ain	•		Ovalized	:	→
	Centre No	ot Concer	ntric to	o/s	BOM/Route	Har	dwar	re	L	Over/Under	tolerance	Temperature/Cure
•	Cracks		İ		Broken/Damaged	Insp	pectio	on Incomplete	·	Part Incorre	ct	Weld
	Crushed/	Crimped.	 		Burrs	Inst	tructi	ons Incomplete/	/Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs				Contamination	L Ma	inte	nance		Part Moved		
[Heat Trea	ıt		-	Countersink	Mis	label	led		Positioned \	Wrong	
	Inspection	n Strip in	Tube		Cut Too Short	Mis	read			Power Loss/	Surge	Other
ſ	Ripples in	Bend	ļ		Drill Holes	Offs	set					
	Torque W	aves in E	xtrusio	n 🗍	Drawing	Out	t of C	alibration			Į.	
	Turning S	DISPOSITION Rework Scrap Use-as-is Work Order Update Use-as-is Work Order Update Thermoforming Finishing Small Fab Prod. Eng. Coor. Quality Other Date Step Qty Orlor Orlor Other Date Step Qty Orlor Orlor Other										

Outside Dimensions

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Wave/Twist in Tube

Picklist Print

February-21-13 12:40:09 PM

Work Order ID:

97680

Parent Item:

D2348

Parent Item Name:

Wearplate

Start Date: 3/18/13

Required Date: 3/18/13

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP Rev A

Removed from 9 Digit 05-12-05 JLM

124003

Comments.		Now on Waterjet 0		JLM									
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3996-FE-832-EF Self-Clinching Fastener		Manufactured	. No		,	180	Each	580.0000	4	80	FF	- 1-3	-04-0
	•			Location		Loc Qty	Le	oc Code					
				GA		580							
				8250	02	46				·			
				8572	27	34				05			
				9603	38	500				80	Λ		
M6061T6S.063 6061-T6 .063 Sheet		Purchased	No			100	sf	295.0625	0.0198	0.416842	- 1	13.03.0	0b
				Location		Loc Qty	<u>L</u>	oc Code					
				MAT021		295.0625							
				123	135	120.5625						•	

174.5

DQA:	Date:	•

CR.	Yes / No	WORK ORDER NON-CONFORMANCE /	UPDATE
Ch.	163 / NO	WORK ORDER HOR COM ORMANCE /	0.0/112

QA Closed:

Date:

										QA Clusea.	Date	- ·
Work Orde	r.				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
TTOIR Orde			<u> </u>		Rework	7 l		Skid-tube	Crosstube		Water,Jet	Engineering
Part N	0.				Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
			i		Use-as-is	∮ 		noforming	Finishing	4	re/Packaging	Other
NCR N	0.				Work Order Update	1		Large Fab	Composite		Supplier	
	-											
Root				Descr	iption of work order update	Init			ction	Sign &	,	
Cause	Date	Step	Qty		or Non-conformance	Chief	Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data											·	
Equip/Tooling	_											
Operator	_											
Material	_	ļ	1 }									
Setup		ļ									!	
Other								!				
Process	_	1				ļ i						
Supplier	_											
Training	_										'	
Unapproved	i				_	1				<u> </u>		
					· · · · · · · · · · · · · · · · · · ·	AULT (CATE	JORY				
Landin					General	Пс	:.		Г	Ovalized	, r	Pressure/Forced
	Bendir	_			Bend	\vdash	rain		-	4	, -	Temperature/Cure
<u> </u>	-	Not Conce	entric to	· 0/S	BOM/Route		Hardware		Over/Under	<u> </u>	Weld	
-	Cracks		Broken/Damaged		Inspection Incomplete		Part Incorre Part Lost/M	, <u>, , , , , , , , , , , , , , , , , , </u>	Wrong Stock Pulled			
-	Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear Maintenance		/Unclear	Part Moved	- L			
-	Cuffs		Contamination		islabe		<u> -</u>	Positioned \				
	Heat Treat		Countersink	\vdash	isread		-	Power Loss		Other		
] -	Inspection Strip in Tube Cut Too Short			isread ffset	I	L.	Trower ross/	Juige	Tottles			
	Ripples in Bend Drill Holes		-	\vdash		alibration			:			
-	Torque Waves in Extrusion Turning Sequence		Drawing Finish	 	Out of Calibration Out of Sequence							
	_	g sequenc Twist in Tu		-	Folio			Dimensions				
U (500045 (0)					Trono	1 10	utside	Differisions				

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DART AEROSPACE LTD	Work Order:	97680
Description: Wear Plate	Part Number:	D2348
Inspection Dwg: D2348 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

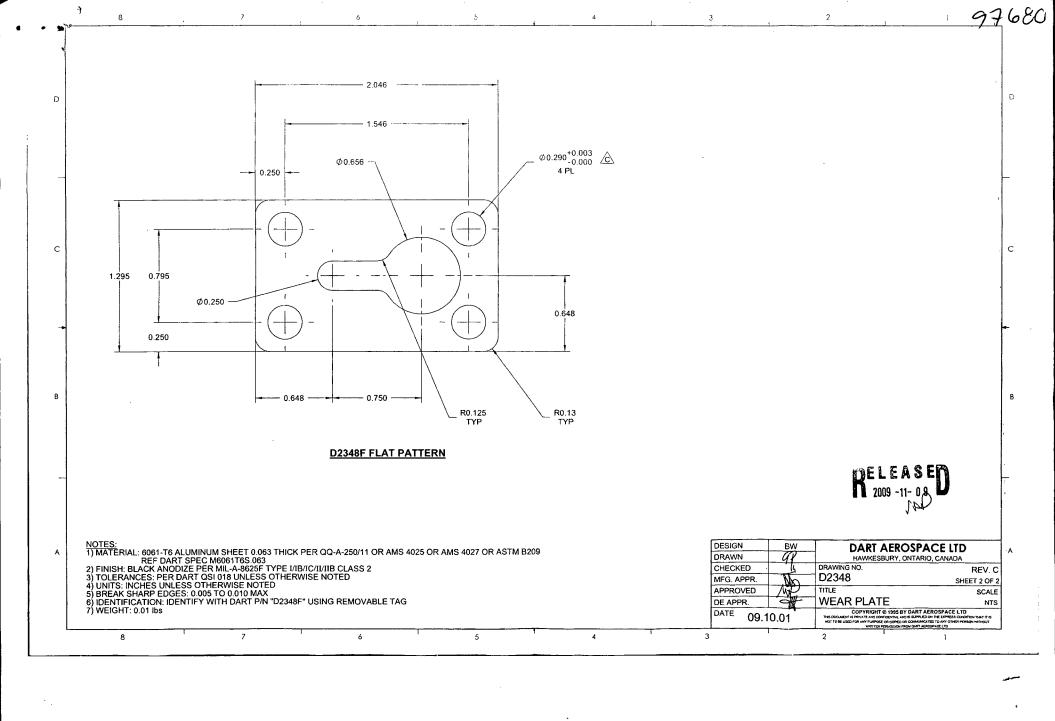
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments	
0.250	+/-0.010	0.250	/		ver	MN-	01
0.648	+/-0.010	0.648			Vers	11	' '
0.795	+/-0.005	0.792	1		ver	11	,,
2.046	+/-0.010	2.048	V		ven	11	17
1.295	+/-0.010	1.295	1		ver	11	1,
Ø0.656	+0.005/-0.000	0.656	/		ver	"	2,
Ø0.290	+0.003/-0.000	0.290	V		VUN	11	11
Ø0.250	+/-0.010	0.250	V		Venu	11	
0.250	+/-0.010	0.250	1		Ver	11	
0.648	+/-0.010	0.648			Vev	V	(1
1.546	+/-0.005	1.546	V		Vern Vern Vern	11	Č.
							V 480
						-	
							1
		·		,			
			~^^				

		·	1 DAG		
Measured by:	Mal	Audited by:	/ 00	Preliminary Approval:	
Date:	13.03.06	Date:	13-03-01	Date:	

Rev	Date	Change		Revised by	Approved
Α	04.06.25	New Issue	P/O D350-616-015	KJ/JLM, C	11
В	10.06.04	Dimensions up	date per Dwg Rev C	KJ X	M.

QTY -041 P/N DESCRIPTION ITEM X D2348 WEAR PLATE 1 D2348F FLAT PATTERN 4 D3996-FE-832-EF SELF-CLINCHING FASTENER D3996-FE-832-EF -SELF-CLINCHING FASTENER 4 PL D2348F-UNCONTAGE. D. COPY TBALL FOR BAENT V. 17 or_{iCE} 97680 MLS 13-02-26 **D2348 WEAR PLATE** C . REDRAW, ADD +0.003/-0.000 TOL (ZN D4-2), NCR 08-042 09.10.01 B2 CHANGED BACK TO 6061-T6 02.02.21 DS B1 CHANGED TO AISI 304/316 MATERIAL DS 00.03.07 CHANGED PEM INSERT TO 8-32 BW 95.02.20 NOTES:
1) MATERIAL: N/A
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2348" USING REMOVABLE TAG
7) WEIGHT: 0.01 lbs

(L. V.		DEGOMM HOM	0.	0,
DESIGN	BW	DART AER	OSPACE L	TD
DRAWN	92	HAWKESBURY.	ONTARIO, CANA	.DA
CHECKED		DRAWING NO.		REV. C
MFG. APPR.	N.	D2348		SHEET 1 OF 2
APPROVED	#	TITLE		SCALE
DE APPR.	-11	WEAR PLATE		NTS
DATE 09.1	0.01	COPYRIGHT @ 1995 BY DART AEROSPACE LTD LIES DODINGH IN PRINCIPLAN CONFIDENTIAL HAVE BY DART AEROSPACE LTD LIES DODINGH IN PRINCIPLAN CONFIDENTIAL HAVE BY DARTH SECONDINAL HAVE BEEN WITHOUT ARTHUR PRINCIPLAN CONFIDENCE AND TO BE A CONFIDENCE AND TO BE		





A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

Pack List

Number: 62282

Date: 26-Mar-13

To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada Ship To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada

Ph: 613-632-52	Pax: 613-632-1185	Ph	613-632-5200	Fax: 613-632-1185	
Terms		Ship Via			
Quantity	Description				
1	Part: ASST		Rev:		
lot					•
	3 PCS 647.7918 3 PCS 647.1814				
	3 PCS 647.7917				
	4 PCS 41232-200-002-001 HARD ANODIZE BLACK				
	MIL-A-8625 TYPE III CLASS 2				
	24 PCS D2348				
	120 PCS D2428D2348				
	8 PCS D4726-1				`
	20 PCS D2056 BLACK ANODIZE				
	MIL-A-8625 TYPE II CLASS 2				
	8 PCS D3299-7				
	BLUE ANODIZE				
	MIL-A-8625 TYPE II CLASS 2 Job: 20130177	PO: 19404	Line:		
	Certificate of Cor	nformance	The second secon		<u> </u>
s - 20 - 20 - 20 - 20 - 20 - 20 - 20 - 2	A.T.G. Industries certifies that all items	in this shipment are in	conformance		
	with all requirements, specifications and	drawings referenced in	n the purchase order.	t.	
	ISO 9001 : 2008 REG	GISTERED			
	ATG SALES-2010 TE	ERMS APPLY			
17 20000	DATE: 26/3/13				
-	MA				
	CERTIFIED SIGNATURE :				
· ·					
	RECEIVER SIGNATURE :				
		•			